1: Mi Mi Khaing 1-5 (no date) 1946 AP1 Burma
Burmese AP4
Mon AP9

CHAPTER TWO

B
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MOULMEIN, Maul-la-Myaing to us, is a fair and prosperous city. It is fair in its descent from the hills behind, in three successive parallel main streets, to the wide Moulmein River, where seagoing ships can sail in, and an island rich in legend lies dark and green in the sunlit water. It had prospered since it was made the military headquarters of Tenasserim in the British annexation of 1826 until, in about 1900, it had over 50,000 inhabitants and a busy rice and teak export trade. Moulmein is fair also becauset he ridges behind are crowned with pagodas, and the hills and rivers contain waterfalls and caves, but to me it is particularly fair like a queen city that rides athwart her domain, because my father and my mother came from the two ends of the natural sphere of Moulmein's influence, Ye and Thaton, each from about 100 miles away, each sent by the family as an adventurous experiment, to meet and contract an understanding in Moulmein.

M
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156

My maternal great-grandfather was a Talaing general, and when I look around at my mother's family I cannot think anything else, for they are all most robust, alive and resurgent; whether I take the members who

2:Scott G-5 (1870's-1909)1910 AP1 Burma (Europeans Chinese) AP1
Burmese AP4

Be
Ba

the Scotch engineer, is not looking. There is a cluster of Chinese carpenters, chipping away with their queer thick-headed axes and planes, which, with characteristic perversity, they pull towards them, instead of pushing away as other workmen do. Here is M——, the English "assistant" at the mill, his hat and coat all covered with rice-dust, which hangs in queer fashion on his eyebrows and moustache. He is in high spirits. "We've got twenty-four pair of stones going to-day, more than anybody else in the creek;" and he goes off to see how the Burmese girls are stitching up the rice-bags, a duty of which he is particularly fond, and over which he spends a quite unnecessary amount of time. There is R——'s voice on the other side of the creek. He is storming at some men in the cargo-boat, who have done something wrong—anchored in the wrong place, or not started for the upper mill at Kemendine last night as they ought to have done. R—— has a voice which is the terror of every loitering coolie and dawdling boat-wallah in his employ; and he will be as hoarse as a North Sea pilot by nightfall, and will want a "double-barrelled" whisky and soda to moisten him before dinner. He wants company down to "the Point," and presently comes skimming across in his gig, manned by Chittagonian Kalassies, and we drop down the creek—they call small rivers creeks in the East—to where it joins with the main Rangoon stream. The Pegu river, tapping the country north-east and north of Rangoon, comes in at the same place; and there is a great crowd of paddy-boats here in the early morning. Each firm has its brokers, middlemen who make the purchases from the farmers that come down with their grain. They have been here since daylight, and fly about in their little dug-outs from one seller to another. The great point in a broker seems to be power of lungs and fluency in abuse. The amount of yelling that goes on at "Monkey Point" would silence the bookmakers' ring at Epsom on a Derby day.

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R—— has not come down to this pandemonium for nothing. There are a couple of big ships in, which must be filled, or there will be demurrage to pay, and a "canal-wallah" is expected this afternoon or to-morrow morning; so that the wheels must be kept going their hardest.

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2:Scott G-5 (1870's-1909)1910 APl Burma
Burmese AP4

CHAPTER XXVI

SILK-GROWING

REARING silkworms, though a very profitable occupation, is not looked upon with any favour in Burma. To get the silk the pupa must be killed; and the taking of life in any form is an impiety always looked upon with great horror by all good Buddhists. Silk-growers are classed together with professional hunters and fishermen. The Four States of Punishment yawn for them, and their portion will be in the lowest abyss of the lowest hell. Still there are colonies of silk-growers in various parts of the country; but they live apart from the rest of the inhabitants as a rule, and often have entire villages to themselves. Colonel Horace Browne who, more than any other Englishman took an interest in the ways and occupations of the districts under his charge, states that the cultivators near Prome, where more silk is produced than in any part of Burma, are nearly all Yabeins —a race of the same stock as the Burmese, but despised by them independently of their crime in the way of habitually taking animal life. So much has the cultivation of silk become identified with them, that to Burman ears the term Yabein is virtually synonymous with that of silk-grower. They usually live on the hillsides, occupying themselves like the poorer Burmans and Karens, with taung-ya cultivation; burning the forests on the slopes and sowing the ground thus enriched with the wood ashes, with rice, cotton, or oil-seed. The system is viewed with very little approval by the government officials, for the taung-ya soil, hardly exhausted by the single crop raised off it, immediately produces a dense shrub-growth of no use to anybody, certainly not to the foresters.

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563 241 133

14: Brant E-5 (1949-50) 1954 AP1 Burma
Burmese AP4

I

THE VILLAGE SETTING AND THE PEOPLE

Tadagale is a suburban community of Lower Burma, about four and one half miles north of the city center of Rangoon, chief port and national capital of the Union of Burma. To reach the village most readily one travels by automobile northward from the city along Prome Road, a main highway, to the junction with Kokine Road, beyond the city limit, on to which one turns eastward. After a quarter mile or so, one again goes northward on to a bumpy, poorly surfaced road which soon becomes dirt and terminates abruptly, after another quarter mile, at a small bridge. Tadagale means 'small bridge,' and it is after this bridge that the village is named. A few steps walk over the bridge brings one almost to the center of Tadagale. (See map on following page.)

Tadagale is more or less a 'line' type village, about 3000 yards in length. The domestic dwelling area is constituted by houses and granaries strung along the sides of a main dirt path which is just wide enough for a single bullock cart — or a jeep — to pass without scraping the bushes and trees. This area is heavily shaded from the intense tropical sun by many trees that grow in the household compounds and along the path; palms and banyans are the most prominent types. The houses are rectangular in shape, with low, slanting roofs, and platform-like porches in front. Among the more prosperous families of the village it is not unusual to find houses of plank construction, with roofs of corrugated iron. More frequently, houses are made of bamboo matted sides and palm thatched roofs. Every two or three houses share a well, which is simply an unlined and uncovered hole of perhaps ten to twelve feet in depth. In almost every compound there is a vegetable garden, from which the family supplies itself and realizes some cash income by the sale of any surplus.

To the east of Tadagale's dwelling area, perhaps five hundred yards distant and running parallel to it, is a railroad line, which begins in Rangoon and terminates at Mingaladon, about five miles north of Tadagale. A small railroad station is located at the eastern terminus of the path on which one finds oneself immediately after crossing the bridge that leads into the village. The villagers do not use the railroad nearly so much as they use buses, which run from Tadagale to Rangoon frequently.

Beyond the railroad line, still farther east, lie the paddy fields, extending out to the winding Pazundaung Creek. This creek begins at the southeastern tip of Rangoon, where the Rangoon and Pegu rivers join, and flows in a twisting course northward to separate Rangoon and the heavily populated area immediately north of the city from the sparsely settled area to the east.

Tadagale's climate is that of the tropical monsoon belt, with three well-defined seasons. From the end of October to about the end of February is the Dry Season, characterized by the absence of rain, with cool mornings and evenings. The daily maximum temperature is in the 80's and the humidity is moderate. English-speaking Burmese call this season winter; at night it is cool enough to sleep under one light blanket. The Hot Season commences at the beginning of March and lasts until June. Temperatures rise to daily maxima in the middle to high 90's, the earth is parched and cracked, and the loose dirt on the village paths, caught by occasional breezes, forms choking

25; Ferrars E-5 (ca. 1890) 1901 AP1 Burma
Burmese AP4

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3. SUNSET ON THE COAST.

CHAPTER I

INTRODUCTORY

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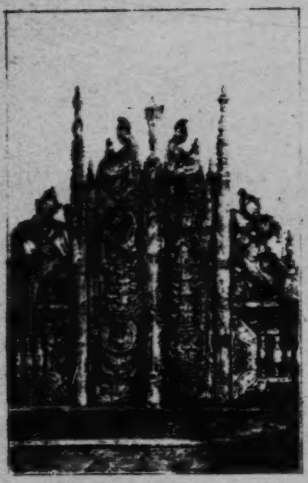
4. ESTUARY OF THE SALWEEN.

BURMA remained in isolation throughout the longest period of her history. One result of this was that her type grew more and more distinct. The isolation of Burma was due to her geographical position, not to the prejudice which animates other Mongolian states. Burma is shut away in a coign of the earth between mountain wastes and the ocean. The kindred nations settled within the same natural confines, one after another came under the sway of Burma. They fought among themselves and they traded among themselves; the wars and the commerce of the greater world beyond affected them little. No base of attack was near enough to Burma for the ancient conditions of warfare. On the west the seas were too wide for the transport of armies; on the east serried ranges of hills blocked the efforts of China to push her way to the coast. Burma possessed no staples of trade to encourage

25: Ferrars E-5 (ca. 1890) 1901 API Burma
Burmese AP4



7. ANCIENT GATE, WITH FIGURES OF THADYA-MIN AND KEINNAYA.

is part of India. The phrase *Indo-China* is also misleading unless in respect of geography. In respect of climate, flora and fauna, *Further India* is not inapplicable. A probable Indo-Aryan admixture exists in the north-east (Arakán). But Burma Proper and Pegu are as distinct from India as Tibet itself.

The original Burman tribes are conjectured to have pushed their way south from the mountains of Tibet. They divided into three principal branches, Arakán (*Rakáing, Yakáing*) on the west, Paung on the east, and Burma (*Bamá*), which attained to the chief position, in the middle, on the northern Irawadi (*E-ya wadi*). Nothing is known of the early history of these nations. But it is certain that in 1000 A.D. Burma was a large and powerful kingdom, with its seat at Pagán. About that time the first historical conquest of the lower Irawadi was effected. From the fact that the country was not permanently subdued it may be inferred that the power of the Mun or Peguan race (later called Talaing) was not greatly inferior to that of the Burman. The Muns, from the affinities of their language, are conjectured to be of Annamitic origin. There is mention of the Pagán kingdom independently of the Burman chronicles, and there is above all the evidence of the ruins of Pagán, probably the mightiest of their kind. They testify to the power of the kingdom and the influence of the

8. ANANDA PAYA, PAGAN.

25: Ferrars E-5 (ca. 1890) 1901 APl Burma
Burmese AP4

104. OUTLOOK OVER MIXED FORMS OF CULTIVATION.

the vagaries of the rivers. A good season is one in which a large proportion of the fields have water enough for an early start and in which the rainfall is steady, not leaving the surface to dry up by a long break in the rain nor deluging the soil at other times. All the alluvial land of favourable elevation and quality is laid out in level rice-fields. Where the rainfall is ample—fifty inches and upwards—portions of the diluvial land with tenacious soil can be utilised in the same way by merely saving the surface-water. In regions of lighter rainfall, in a few favoured localities, such land is brought under rice by help of irrigation and if need be by terracing as well. The rice-fields are bordered by low turfy balks (*kazin*) about a cubit high, to keep in the water. These regular rice-lands form less than one-tenth of the gross area of the country. The rest is mainly irreclaimable, chiefly mountain, waste. The waste areas of the alluvial plains (*kwin*) are flooded from three to ten feet deep in the rains. They are clothed with elephant-grass (*kaing*) studded, through with silk-cotton trees and a few other species. The lowest levels in the *kwin* form shallow lagoons (*in*, No. 103) which dry up in the hot season. Dry-season crops—sugar-cane (which is also grown on the wet system), maize, lentils, and vegetables for a limited market—are obtained in the *kaing*.

106. HILL-PEOPLE MAKING THEIR CULTIVATION CLEARING (p. 149).

Burma has become the rice-mart of the world. Since the development of this trade the price of the staple export has more than quadrupled, producing in the lower country a prosperity which has no parallel in respect of its equal diffusion. It is believed that this development of the wealth of Pegu has been favoured by the upheaval

25: Ferrars E-5 (ca. 1890) 1901 AP1 Burma
Burmese AP4

of the delta of the Irawadi, by which fresh silt-beds are raised to the cultivation level. The town of Thâton, now sixteen miles from the coast and without a sea approach, was, in historic times, a port. Ships came up to Tenaserim in the south, the ancient emporium of trade across the Peninsula to Siam, and to Akauttaung in the north, and probably to Pegu. A mass of precise data on this subject was collected by the late Mr. John Merrifield, who came to the conclusion that Tenaserim had risen fifteen to twenty feet in the course of the last 300 years. In 1900, ten and a half million acres were cultivated in Burma. The rice crop was estimated at three and a half million tons, of which two millions were exported, worth £14,000,000. Fallow lands were estimated at five and a half million acres and arable waste at twenty-four millions, out of a gross area of one hundred and one millions. In 1872 a considerable firm failed over the enterprise of bringing a few thousand acres of reputed arable waste at Kayásu under cultivation; the crops got so much water that they rotted. The area has lain waste ever since. Most of the waste land granted to companies has been resumed, on account of their failure to satisfy the condition of utilising the land. The conditions which render land suitable for wet cultivation are less simple than they appear at the first glance. It is possible that the estimate of the arable waste is much too high.

106. THE RICE PLANT IN THE EAR.

Where the fields depend on the surface-water for their supply, a margin of fallow has to be left; where they get a deposit of river-silt it is unnecessary. If manure is plentiful it is taken out on the fields. But this is seldom the case because the cattle are so much at large. On the outskirts of the rice-fields, which are dispersed in groups throughout the *kwin*, fallow land may readily relapse into waste. The depopulation of Pegu (Chronology, 1570, 1591–1740) threw great areas out of cultivation. Anyone was free to reclaim waste, and is so still. In Burma Proper, where good land is much scarcer than in Pegu, proprietors are fixed on the soil in many places by royal grants (*kye-mye, bôbabaing*). There were also royal demesne lands leased to tenants.

In the dry zone of Burma Proper, rice cultivation is impracticable except where rivers flood their margins or where facilities for irrigation exist. Rice

25: Ferrars E-5 (ca. 1890) 1901 AP1 Burma
Burmese AP4

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173. VILLAGE SCENE IN THE DRY SEASON.

see Appendix E), with a fall of fifty to two hundred inches according to locality, and with shade temperatures of 75 to 88° F. The cool dry season is from November to February (*Nadàw, Pyathò, Tabòdwè*), with rare showers, and shade temperatures ranging from 50 to 80° in the twenty-four hours. The cool season is most pronounced in the inland and northern regions, less so in the south and the neighbourhood of the sea. At elevations of four thousand feet, winter-night frosts occur. The hot months are March and April (*Tabáung, Tagú*), with occasional showers, and shade temperatures of 80–95°, and 90–105°, according to locality, in the course of the day. There is always a considerable fall of temperature at night in Burma. October (*Thadìndyut—Tazáungmòn*) frequently has the character of the hot months. The regions which have the lowest temperatures in the cool seasons have the highest in the hot season. But the greater heat of the dry zone is relatively not so trying as is a lesser heat in an atmosphere saturated with moisture, which impedes the cooling of the body by evaporation. As the heat attains its climax, clouds begin to gather. The rains break, often quite abruptly, with violent thunderstorms. Nevertheless, lightning-stroke is uncommon. Hail is very rare. Even before the rains set in, the great rivers Irawadi and Salween begin to swell, owing, as it is believed, to the melting of Himalayan snows in which they have their sources. The high floods of these rivers, however, coincide with the heavy rainfall in Burma. Towards the beginning of July the rivers and tributaries have risen ten to twenty feet, submerging their banks and flooding the low-lands. The Irawadi at Mandalay, where it is about two miles wide, rises thirty

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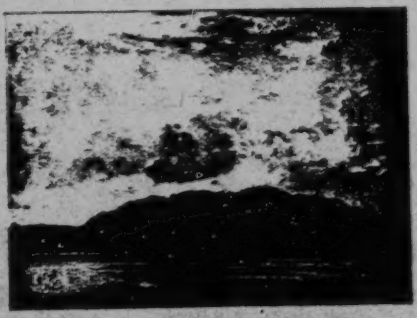

174. SOUTH-WEST MONSOON CLOUDS.

25; Ferrars E-5 (ca. 1890) 1901 API Burma
Burmese AP4

[opp. p. 80]

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120 THE FLOODS IN THE LOWLAND FOREST

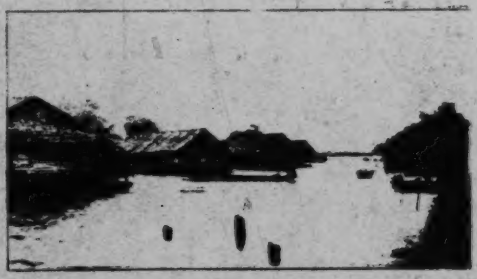
25: Ferrars E-5 (ca. 1890) 1901 APl Burma
Burmese AP4

178. VILLAGE ENVIRONS IN THE FLOODS.

feet. The Salween, above the rapids, with a width of a quarter of a mile, rises fifty feet. The high level is maintained, with fluctuations, till September. The water in the main channels is turbid and heavy with yellow silt, but it clears itself in the grass-grown *Kwin*. Many a cart-track of the dry weather becomes a creek passable by deep-laden boats. The whole aspect of the country and mode of life are changed; the villages of the Delta are accessible by water, and many stand in water. At this season the heavy traffic of the country proceeds. In some places the rise is so great and so variable that the people depend on their boats, and every child has a tub of its own (Nos. 159, 161). Such a village is Sanyuè on the Myimmakà (*Myit-ma-kà*), the river that denies its tribute to the great Irawadi, and delivers the waters of the Yôma straight to the sea (see map, and *môwakà*, p. 115).

The rise of the spring-tides above mean low-water level on the coast of Burma is sixteen to eighteen feet. In certain estuaries of the Martaban Gulf dangerous bores are produced. In the Delta, which is a network of creeks, and in Arakân, the facilities afforded for traffic by the tidal currents are unequalled.

The abatement of the monsoon rains, in the course of September, like the break of the monsoon, is attended with thunderstorms. The surface soon dries and the sub-soil water begins to sink, leaving but little marsh land (*kwet*). As the hot season advances, the trees and bamboos of the dry forest lose their leaves, and the grasses wither, covering the soil with an inflammable layer. In the open, the heavy dews



177. VILLAGE SCENE IN THE HIGH FLOOD.

25: Ferrars E-5 (ca. 1890) 1901 AP1 Burma
Burmese AP4

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178. SCENE IN THE PLAINS AT FLOOD-TIME.

keep the pasture green till March. By April the elephant-grass in the *Kwin* is dry and ready to burn like a prairie. Camp fires and cultivation fires spread, or the stump of a burning cheroot starts the fire, which runs through the *kaing* and the bamboo forest till it is stopped by a broad water-course. In the hot weather the thatch and bamboo of the houses are as dry as tinder, and village fires are frequent. A hook and flapper on long bamboo poles are provided at every house to tear off the thatch and beat out the fire (No. 431). Water-pots are set along the roof-ridges, so that they only need to be overturned. But if a high wind is blowing, the burning thatch is carried across streets and creeks. The people can only save their movables and accept the situation, which they do with characteristic good humour. The religious buildings being more substantial, there is a better chance of extinguishing them when on fire. Religious merit is to be gained by the effort; the whole village turns out with waterpots to quench the flames and slake the embers.

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179. THE IRAWADI AT PROME (p. 187).

25: Ferrars E-5 (ca. 1890) 1901 AP1 Burma
Burmese AP4

[opp. p.90]

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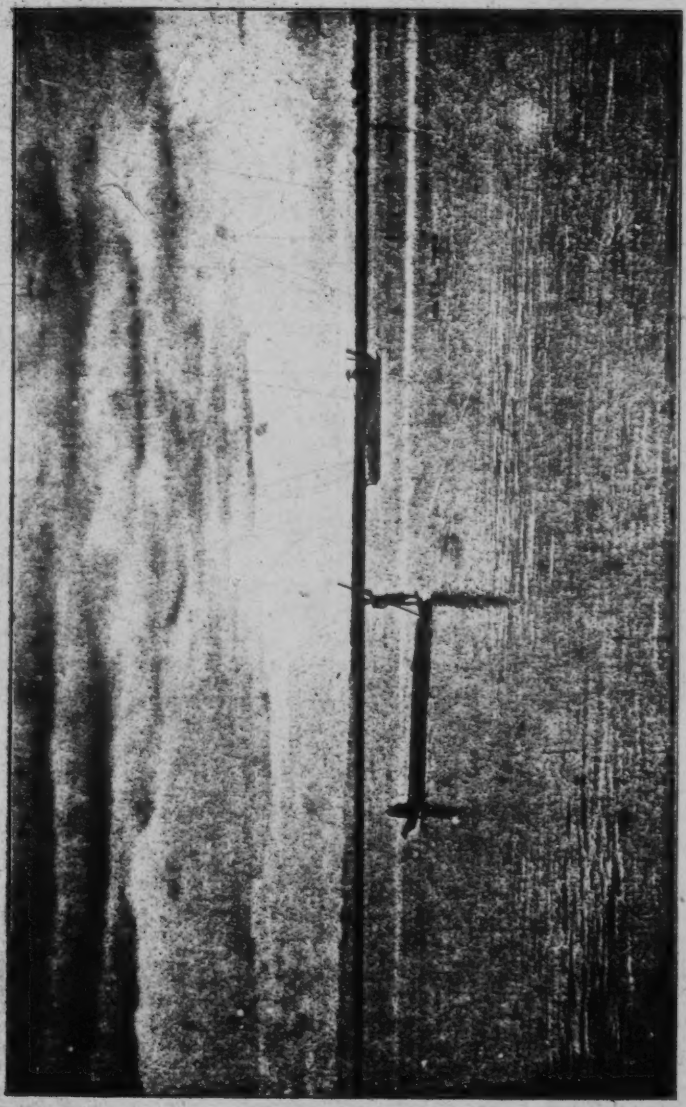

25: Ferrars E-5 (ca. 1890) 1901 AP1 Burma
Burmese AP4

[opp. p. 94]

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208. FOREST STREAM.

25; Ferrars E-5 (ca. 1890) 1901 APl Burma
Burmese AP4

288. CANOPY OF GREAT ZEDI (Vl. pp. 30, 101).

thing like a spoke-shave (*daing-dyaik*), for the rough shaping of the blades after forging, to save their files. The blacksmiths make the axes of the country also. The old Burman axe consists of a long-handled wooden mallet with an iron tip like a small spade. The smiths also make spear-heads for the hill-people, iron shoes for ploughs, mattocks and hoes, tires and axles of carts, dee nails for boats, nippers for sugar-cane and betel-nut, and other tools. They do repairs of locks and fire-arms. A special class of iron-work is making *tî* for *zedi*. The tinsmith's trade was unknown in Burma until fifty years ago. In Pegu it is still in Indian hands; but in Mandalay the Burman tinsmiths are unequalled.

Argentiferous galena is found in Burma, but the ore barely repays working for the sake of the lead. The silver used in Burma and most of the gold is imported from China, India, and Europe. A dozen villages in different parts of Burma get a living by sifting the sand of streams which bear gold. A broad thin wooden dish shaped like a flat cone is filled with sand and gravel, and worked at the water-level with a rotary movement, by which the lighter material is driven out centrifugally. The dish is filled and refilled, and after seven or eight hours' work as many grains weight of gold flakes will have accumulated in the depression at the centre. The out-turn of a steady worker is three to five tikals of gold in the season.

The stock in trade of the gold and silver worker consists of a bamboo blast, clay crucibles, blowpipe, solder and flux, aquafortis and mercury, hammers, punches and anvils of bronze and iron, wire-plate and beading-plate. Bullion is furnished by the customer, who pays from one half up to the full weight, in

339. MOUNTAIN CASCADE.

25; Ferrars E-5 (ca. 1890) 1901 APl Burma
Burmese AP4

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342. DEFILE BELOW THE GREAT RAPID OF THE SALWEEN.

which it is hammered is obtained from bamboo-fibre.

In Burma the idea still prevails that gold may be compounded from baser metals or the quantity of fine gold augmented by their means. Alchemists are found in every town, who experiment in the hope of success or practise on dupes who furnish the gold that is to be increased. A furnace and blast is the chief appliance of the laboratory, and the potent agent relied upon is mercury. Ingredients of every sort, animal, vegetable and mineral, are experimented with, under the influence of charms and cabalistic forms, whence the name for alchemy, *ekkaya-tè*. The business is under the ban of religion, not alone as being actuated by greed (*lawba*, p. 44), but because primitive Buddhism eschews every thing mystical and occult. The operations are carried on at night for secrecy. Reputed adepts are found among the class of recluses called *yathè*, who from their life in the wilds are supposed to penetrate the arcana of nature.

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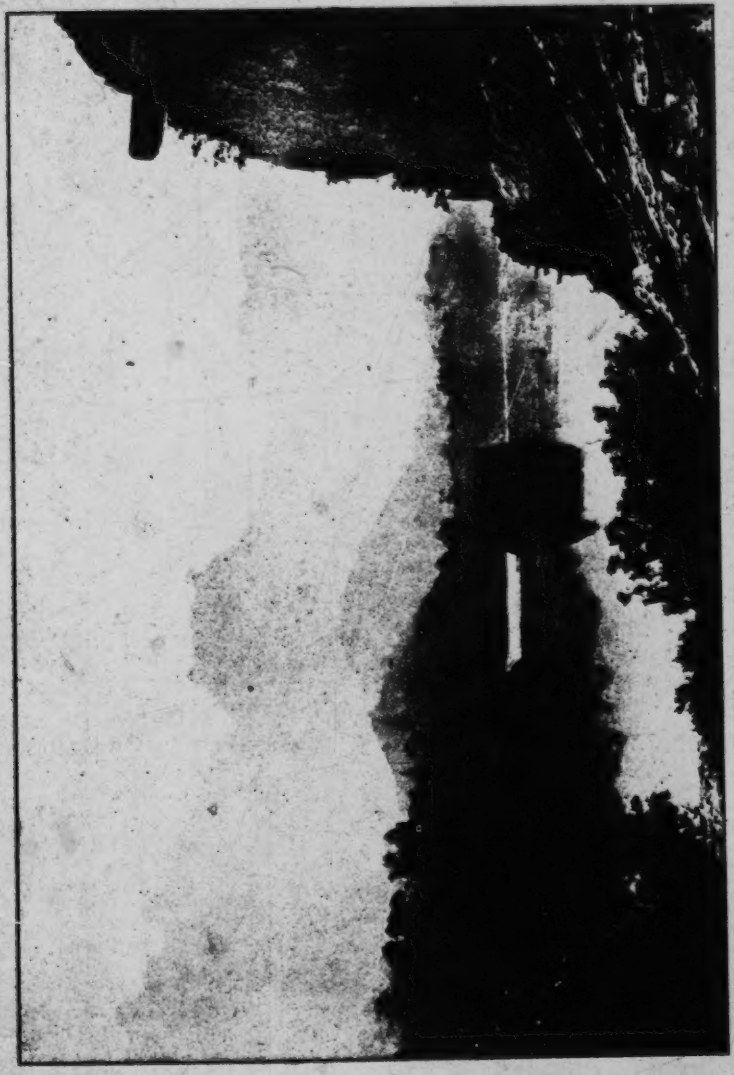
Wood-work was greatly restricted until better tools were imported. Planks and scantlings used to be laboriously prepared for boat-building and for palaces, religious edifices, and the houses of the great. Excepting the inner gates of the masonry temples, wood-work over a century old is scarce. But before the Burmans possessed the means of turning their timber to account for themselves, the country had become noted for its stock of teak. Burma possesses many valuable woods, but the pre-eminence of teak is such that for general purposes *timber* had come to mean always *teak* timber. Teak possesses the advantages

343. TEAK-TREE OUT OF LEAF (MARCH).

25; Ferrars E-5 (ca. 1890) 1901 AP1 Burma
Burmese AP4

[opp. p.112]



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[To face p. 113.

SHE SCENE ON THE SALWEEN RIVER.

25: Ferrars E-5 (ca. 1890) 1901 AP1 Burma
Burmese AP4

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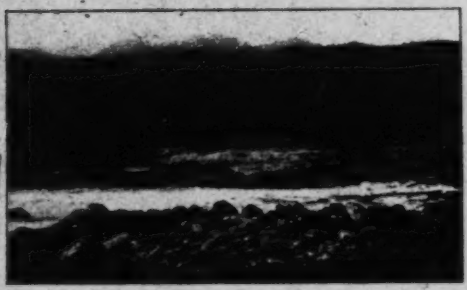

247. THE GREAT RAPID OF THE SALWEEN (HATJI).

the chance for the timber-trees. A seeding teak-tree may originate a clump of young teak on the natural clearing, just as happens on cultivation clearings (*taungya*, p. 149). Sometimes a mixture of trees in its turn suppresses the young bamboo. So far from forming vegetable mould on the surface, the great crisp leaves of teak (No. 355) provide rich fuel to the forest fires which burn every season and kill the struggling seedlings of trees. The bark of teak has about an eighth of an inch of a loose corky layer which protects the quick against scorching. The bare soil is exposed to severe erosion by rain. It is only where contributions of a better kind than its own are made to the soil that teak flourishes. Its occurrence is limited to patches of the dry forest zone, in which drainage and other factors not yet understood concur in a favourable way. Teak plantations are easy to start and the young trees are very promising. But they begin to languish and to seed prematurely when planted pure, as they mostly are. Teak attains its full height early, before commencing to flower, which it does in its axes of growth. Where the bloom drops off, no further straight length is grown. The stock of teak is in the main mature and over-mature. It is the savings which the mixed forest has accumulated of this imperishable wood, and is not supported by relays of younger generations in due proportion. Much even of the apparently rising stock is exhausted in vigour and is stationary; a tree crippled in vigour may never attain a girth of five feet. The blanks made by working out the teak are naturally filled up by the more numerous competing species. Teak seedlings in open situations grow twenty to thirty feet

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248. VORTEX OF THE GREAT RAPID.

25: Ferrars E-5 (ca. 1890) 1901 APl Burma
Burmese AP4

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229. PUSHING THE LOGS OFF THE SHOALS (ALUNG).

timber-work at eighteen years, and are at their prime from thirty to sixty. Females and tuskless males (*haing*) are worth one thousand to two thousand rupees; tuskers from one thousand five hundred to four thousand. Tuskers are of use for manœuvring the logs in the shallow streams and getting them off shoals. The logs are

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not launched into the main stream or river until the last freshets of the season have gone down, for fear of the timber becoming unmanageable. The logs are allowed to drift singly as far as the deep water, where they are stopped by a boom, for sorting and rafting to port. On the Irawadi and Sittaung, the main water-course is available for rafting, but on the Salween, only the last sixty miles below the rapids. The Salween tears its rugged course through the limestone mountains which occupy the centre of the Eastern Peninsula, traversing some ten degrees of latitude and tapping teak localities on a good part of its way. Deep tranquil stretches alternate with furious rapids, the violence of which may be judged from the fact that teak logs are often shivered in splinters. The foresters stamp the timber all over with their property-marks. They have to bide their time until the logs reach the rope-station or boom (*kyodán*) and can be sorted. In the south-west monsoon the logs have to be salved one by one by men in canoes. The deep-water raft consists of five to ten tiers of as many logs each, securely bound with rattan by the drag-holes to cross-poles, and linked with the same material. The raft is manned by four or five men, and is often several weeks on its journey. It may not have to bring up until it reaches tidal waters, when it is easily moored. But where the raft has to be stopped against the full force of a three to five knot

230. LAUNCHING REAPED LOGS.

25: Ferrars E-5 (ca. 1890) 1901 APl Burma
Burmese AP4

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262. ROPE-STATION ON THE SALWEEN (KYODAN).

current, a remarkable device is employed. Two ten-foot handspikes, with a shoulder two feet above the point, have mooring-rattans from each end of the raft, one hundred feet long and an inch thick, bent on to them. One of these is sent ashore from the forward end of the raft and worked like a plough in the bank, going deeper as the raft slews round and the tension increases, and so stopping its way by degrees. If the first attempt fails a second is made from the other end of the raft, which is then the forward one. Arrived in port the logs are dragged up the mud-banks by elephants. But when the path is blocked, a powerful elephant sometimes carries a log bodily. The whole of the operations of bringing the timber to market are combined by a timber-broker (forester, *thiggaung*).

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Teak cuts readily, though it blunts the tools very soon. There is little waste. Sawn planks are displacing bamboo for the better-class houses. Sawyers earn from one-half to one rupee a day. The indigenous carpenter's tools were a small adze (*pègòt*), chisels and gouges (*sauk*), awls (*hsu*), and a rough saw (*hkwa*), besides *dâ* and axe (*paussein*). The Burman adopted the Chinese plane (*yut-haw*, "selecting-shave") with the Chinese straddle bench. The English carpenter's rule is also general. When the impulse to good house-building was given by the production of cheap planks, the immigrants from China got the whole of the work.

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The Burmans have begun to oust them from the heavy carpentering and from the joinery as well. Ordinary Burman carpenters earn ¾ rupee a day, the better workmen 1 to 1¼ rupees a day, compared with the Chinaman's 1½ rupees. The wood-work is left

263. BINDING THE LOGS INTO RAFTS.

25: Ferrars E-5 (ca. 1890) 1901 AP1 Burma
Burmese AP4

484 inferior to his own—not penetrating as far as China or India, where he might
485 witness the dire struggle for existence which has disciplined the races about to compete for his soil—the Burman fails to realise how enviable is the lot he

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215. TOWN ENVIRONS IN THE DRY ZONE.

216. CARVED FIGURE OF ANANDA (p. 85).

now enjoys and to recognise the nature of the influences which may effect the decline of his prosperity. Great as are the facilities for travel from the native point of view, to Europeans the discomfort of travel, once off the lines of rail and steamer, is so considerable that few who can avoid it visit the interior.

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217. FERRY STATION.